

Appln No. 09/112,786
Amdt. Dated March 11, 2004
Response to Office action of September 11, 2003

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A hand-held digital camera, comprising:
an image sensing means for sensing an image;
modification means for modifying said sensed image in accordance with modification instructions input into said camera from an inbuilt input means; and
an output means for printing out said modified image;
wherein said modification means includes a series of processing elements arranged around a central crossbar switch that can selectively be configured to pass data of the sensed image directly between the processing elements via the crossbar switch.
2. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein each of said processing elements includes an Arithmetic Logic Unit (ALU) acting under the control of a microcode store, wherein said microcode store comprises a writeable control store.
3. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein each of said processing elements includes an internal input and output FIFO for storing pixel data utilized by said processing elements.
4. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein said modification means is interconnected to a read and write FIFO for reading and writing pixel data of images to said modification means.
5. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein said processing elements are interconnected to form a ring in which each element is separately connected to its nearest neighbours in addition to the crossbar switch.
6. (Previously presented) A hand-held digital camera as claimed in claim 2, wherein each of said ALUs includes a series of inputs interconnected via an internal crossbar switch to a series of core processing units within said ALU.

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7. (Previously presented) A hand-held digital camera as claimed in claim 6, wherein each of said core processing units include at least one of a multiplier, an adder and a barrel shifter.
8. (Previously presented) A hand-held digital camera as claimed in claim 6, wherein each of ALUs includes a plurality of internal registers for the storage of temporary data.
9. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein said processing elements are further connected to a common data bus for the transfer of pixel data to said processing elements.
10. (Previously presented) A hand-held digital camera as claimed in claim 9, wherein said data bus is interconnected to a data cache which acts as an intermediate cache between said processing elements and a memory store for storing said images.
11. (Previously presented) A hand-held digital camera, comprising:
an image sensing means for sensing an image;
modification means for modifying said sensed image in accordance with
modification instructions input into said camera from an inbuilt input means; and
an output means for printing out said modified image;
wherein said modification means includes a plurality of processing elements
functionally interconnected to each other via a crossbar switch.
12. (Previously presented) A hand-held digital camera as claimed in claim 11, wherein each of said processing elements includes an Arithmetic Logic Unit (ALU) acting under the control of a microcode store, wherein said microcode store comprises a writeable control store.
13. (Previously presented) A hand-held digital camera as claimed in claim 11, wherein each of said processing elements includes an internal input and output FIFO for storing pixel data utilized by said processing elements.

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14. (Previously presented) A hand-held digital camera as claimed in claim 1, wherein said modification means is interconnected to a read and write FIFO for reading and writing pixel data of images to said modification means.
15. (Previously presented) A hand-held digital camera as claimed in claim 11, wherein said processing elements are interconnected to form a ring in which each element is separately connected to its nearest neighbours in addition to the crossbar switch.
16. (Previously presented) A hand-held digital camera as claimed in claim 12, wherein each of the ALUs includes a series of inputs interconnected via an internal crossbar switch to a series of core processing units within said ALU.
17. (Previously presented) A hand-held digital camera as claimed in claim 16, wherein said core processing units include at least one of a multiplier, an adder and a barrel shifter.
18. (Previously presented) A hand-held digital camera as claimed in claim 16, wherein each of the ALUs includes a plurality of internal registers for the storage of temporary data.
19. (Previously presented) A hand-held digital camera as claimed in claim 11, wherein said processing elements are further connected to a common data bus for the transfer of pixel data to said processing elements.
20. (Previously presented) A hand-held digital camera as claimed in claim 19, wherein said data bus is interconnected to a data cache which acts as an intermediate cache between said processing elements and a memory store for storing said images.